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RCA-03/0045/69

## Basic Imagery Interpretation Report



### NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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## SLONIM VLF RADIO COMMUNICATIONS TRANSMITTER STATION

(SLONIM WEST SLAVE MOON STATION)

DEPLOYED COMM/ELEC/RADAR FACILITIES

USSR

JULY 1969

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NSA review completed

Declassification by NSA/DoD

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INSTALLATION OR ACTIVITY NAME

COUNTRY

Slonim VLF Radio Communications Transmitter Station

UR

UTM COORDINATES

NA

GEOGRAPHIC COORDINATES

53-07-52N 025-23-34E

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MAP REFERENCE

ACIC. US Air Target Chart, Series 200, Sheet M0163-18HL, 4th ed, Oct 66, scale 1:200,000

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LATEST IMAGERY USED

NEGATION DATE (if required)

NA

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## ABSTRACT

This report provides a detailed imagery-derived analysis of the newly designated Slonim West Slave MOON Station (Slonim VLF Radio Communications Transmitter Station), USSR. It includes a functional analysis, location map, mensuration, and photography of the facility.

This facility is one of two MOON (long range navigation aid) slave facilities in the USSR which were previously identified as very low frequency (VLF) communications stations. The other facility is located at Zhemkovka ( )

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The Slonim facility has been identified as the western MOON station because of its similarity to other known MOON stations and a correlation between photography and ( ) for this facility.

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In addition to the MOON antenna, the facility contains a support area and a barrage-type balloon that probably supports an antenna, possibly for backup or emergency use.

## INTRODUCTION

Slonim West Slave MOON Station is one of the five stations in the MOON 3 navigational system (Figure 1). MOON 3 is a long-range low frequency (LF) hyperbolic navigational aid system ( ). The MOON 3 system, an update of the original MOON system, ( )

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The MOON system has been present in the Soviet Union since the late 1950s or early 1960s and was known to consist of four slave stations, two on a north/south baseline and two on an east/west baseline with a master station located at the intersection of the east/west and north/south baselines. The northern slave station is at Pryazha (61-45-35N 033-41-35E, ( ) the master station is at Karachev (53-07N 034-55E, ( )

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( ) and the southern slave station is at Pochtovoye (44-53-18N 033-52-23E, ( )

( ) These facilities have been identified since the early 1960s.

Slonim was not originally identified as the western slave station primarily because of the difference in its antenna configuration from the other known MOON facilities. ( )

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( )<sup>1,2</sup> The Slonim facility is similar in most respects to the western MOON station at Zhemkovka (53-17-18N 048-07-15E; ( )

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( )<sup>3</sup> Both facilities have an LF pentagonal array and balloon-supported probable LF vertical wire arrays. Similar balloon pads have been seen at the master MOON station and the northern and southern MOON slave stations.<sup>3</sup>

Slonim West Slave MOON Station is located at an elevation of 650 feet, 4 nautical miles (nm) northeast of Slonim, USSR. The surrounding terrain is relatively flat and quite low which makes it well suited for LF signal propagation. The facility is secured by a single wire fence and contains approximately 455 acres.

## BASIC DESCRIPTION

### Operational Functions

Two antennas are located in the operations area. The major antenna is a centrally located LF pentagonal array and the second is a balloon supported probable LF vertical wire antenna.

The LF pentagonal array contains six towers, each ( ) high. One of these towers is centrally located and the remaining five (perimeter towers) form a pentagonal config-

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uration around it. The central tower is fed by two separate parallel overhead radio frequency (RF) feedlines that originate at the hardened control/transmitter building (item 5, Figure 2, and Table 1). Each of the perimeter towers is fed via a buried cable emanating from the central tower. Small probable tuning buildings have been placed at the base of each tower. Each of the towers has four stories of guying. A circle of 10 equally spaced masts, each [ ] high with a chord distance separation of 250 feet, is at a radius of 410 feet from the central tower. The balloon pad (item 6, Figure 2) is immediately west of the hardened control/transmitter building.

The support area, located in the northwestern corner of the facility, contains 24 buildings with a total floorspace of approximately 59,000 square feet.

### Status and Activity

The Slonim facility was first observed in [ ] Although the pentagonal array was probably complete on the initial [ ] photography, its completed configuration could not be confirmed until [ ] when it appeared to be operational. [ ]

[ ] The pad for the balloon antenna was complete in [ ] but the balloon was not observed until [ ]



FIGURE 1. LOCATION MAP

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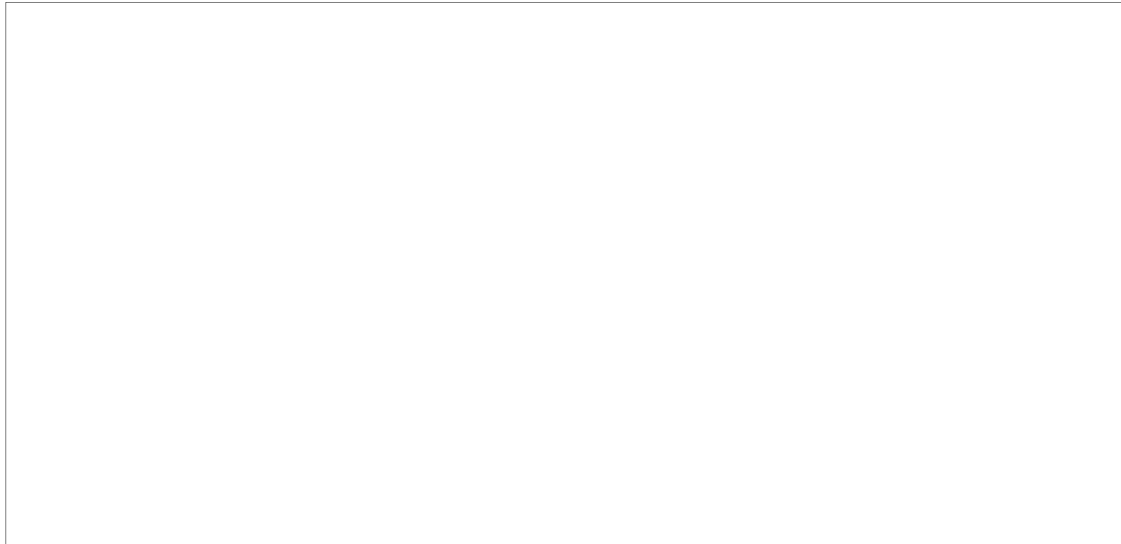
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REFERENCES

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IMAGERY



MAPS OR CHARTS

ACIC. US Air Target Chart, Series 200, Sheet M0168-18HL, 4th ed, Oct 66, scale 1:200,000 (SECRET/

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DOCUMENTS

1. [redacted] [redacted] Reports, 24 Jun 66 (TOP SECRET [redacted])

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3. NPIC. [redacted] Zhemkovka VLF Radiocommunications Transmitter Facility, Jun 69 (TOP SECRET

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REQUIREMENT

COMIREX BC-C/005-69  
NPIC Project 210667

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